

RANGE EXTENSION OF *HELIANTHUS* SPP. (*ASTERACEAE*) IN ARIZONA AND UTAH¹

Gerald J. Seiler² and Luka Cuk³

ABSTRACT.— Two populations of *Helianthus niveus* (Benth.) Brandege ssp. *canescens* (A. Gray) Heiser were discovered in northern Arizona extending the range 300 miles north for this species. *Helianthus deserticola* Heiser range was extended 100 miles east in both Arizona and Utah.

Recent explorations for *Helianthus* species for a germplasm resource collection during the summer of 1980 led to several new distribution records. Range extensions were discovered for *Helianthus niveus* (Benth.) Brandege ssp. *canescens*, (A. Gray) Heiser and *H. deserticola* Heiser.

Helianthus niveus ssp. *canescens* was listed as occurring in southern Arizona (Kearney and Pebbles 1960). McDougall (1973) did not list this species as occurring in northern Arizona. During our explorations we located two populations in northern Arizona, one in a sandy roadside ditch 4 miles northeast of Mexican Water, Apache Co., 29 Sept. 1980, Seiler and Cuk 1496, and the other in sandy soil 21.5 miles northeast of Kayenta, Apache Co., 29 Sept. 1980, Seiler and Cuk 1498. Both populations were small and scattered, and plants were shorter than usual. These collections represent a northern extension of about 300 miles in Arizona.

Heiser et al. (1969) listed the distribution of *H. deserticola* as southwestern Utah, southeastern and west central Nevada, and the extreme northwestern corner of Arizona. Welsh et al. (1973) and Welsh (1978) listed *H. deserticola* as a candidate threatened species, being restricted to sand dunes in Washington Co., Utah. McDougall (1973) did not list this species as occurring in northern Arizona. We found a very large population extending for several miles on both sides of the highway and extending into adjacent fields in sandy soil beginning 7.5 miles northwest of Page, Coconino Co., Arizona, 28 Sept. 1980, Seiler

and Cuk 1485. This collection represents an eastern extension of 100 miles for this species in Arizona. One other large population of *H. deserticola* was found in sandy soil in south-central Utah, 2 miles west of Glen Canyon, Kane Co., 28 Sept. 1980, Seiler and Cuk 1484. This collection represents an eastern extension of 100 miles for this species in Utah.

Specimens cited are deposited at the herbarium of the United States Department of Agriculture, Agricultural Research Service, Conservation and Production Research Laboratory, Bushland, Texas.

ACKNOWLEDGMENTS

We thank the Southern Regional Plant Introduction Station, Germplasm Institute, USDA-ARS, for a grant providing funds to make these field studies possible. We also thank Dr. Charles B. Heiser, Jr., Indiana University, Bloomington, Indiana, for verification of specimens.

LITERATURE CITED

- HEISER, C. B., D. M. SMITH, S. B. CLEVINGER, AND W. C. MARTIN. 1969. The North American sunflowers (*Helianthus*). Mem. Torrey Bot. Club 22(3):1–218.
- KEARNEY, T. H., AND R. H. PEBBLES. 1960. Arizona flora, 2d ed. Univ. of California Press, Berkeley, California.
- MCDUGALL, W. B. 1973. Seed plants of northern Arizona. Museum of Northern Arizona, Flagstaff. 594 pp.

¹Contribution from Agricultural Research Service, USDA, in cooperation with the Texas Agricultural Experiment Station, Texas A & M University, College Station, Texas 77843.

²USDA Conservation and Production Research Laboratory, Bushland, Texas 79012.

³Institute of Field and Vegetable Crops, Novi Sad, Yugoslavia.

- WELSH, S. L., AND G. MOORE. 1973. Utah Plants—Tracheophyta, 3d ed. Brigham Young Univ. Press, Provo, Utah. 474 pp.
- WELSH, S. L., N. D. ATWOOD, AND J. L. REVEAL. 1975. Endangered, threatened, extinct, endemic, and rare or restricted Utah vascular plants. Great Basin Nat. 35:327–376.
- WELSH, S. L. 1978. Endangered and threatened plants of Utah: a reevaluation. Great Basin Nat. 38:1–18.